

Biology

University of Wisconsin-River Falls
www.uwrf.edu/biology

Biology encompasses a wide range of disciplines that use many different approaches to accomplish “the study of life.” From molecules to ecosystems, from microorganisms to people, biologists use the methods of science to gain a better understanding of the nature of the living world. This knowledge can then be applied to solve problems in agriculture, medicine and the environment.

Goals

- to support the select mission of UW-RF to provide quality undergraduate programs in natural science to meet regional needs. This includes providing students with a working knowledge of scientific methods, hypothesis formulation and experimental analysis as well as an understanding of current theories and concepts in biological science. Students will have hands-on experience with laboratory techniques and field research. They will have the ability to communicate scientific ideas in verbal and written forms and to employ electronic technology used in disseminating scientific information. Students will have gained an appreciation for the ethical and social implications of advances in science and technology and the critical thinking skills necessary to evaluate these issues.
- to prepare its graduates to make significant contributions as scientists and citizens.

Curriculum The biology department offers a 34-credit major and a 22-credit minor. Students completing a biology major can obtain a bachelor of science or bachelor of arts degree. The general biology option is appropriate for students who want to be broadly educated in biology or who plan to teach biology. The biomedical sciences option is intended for students going on to professional schools or into biomedical laboratory jobs. The field biology option will be useful for students interested in ecological research or jobs with agencies such as the U.S. Fish and Wildlife Service. A degree with a biology major also requires completion of a minor and additional supporting courses in chemistry, physics and math. The two most common biology degree programs are the bachelor of science with a minor in chemistry, which is usually chosen by students interested in laboratory biology or medical careers; and the bachelor of science with a minor in conservation, which is often selected by those interested in field biology areas.

Faculty The biology department currently has ten full-time faculty, all of whom hold a doctoral degree. Their diverse educational and research backgrounds provide a broad spectrum of expertise in various biological disciplines. They are committed to actively engaging students in the learning process in the classroom, in the laboratory, and in the field. In addition to formal coursework, many students have the opportunity to work with biology faculty in exciting and important research projects.

Career Opportunities Biology majors are prepared to enter a wide variety of career paths. The 2002-03 Occupational Outlook Handbook from the Department of Labor Statistics projects that jobs for biological scientists will grow faster than the average for all occupations through 2010. Biology majors work as laboratory scientists in industry, agriculture, medicine and academia. They work as naturalists and as field and laboratory researchers for state and federal agencies such as the Department of Natural Resources, the Department of Agriculture and the U.S. Fish and Wildlife Service. Some find employment in sales and service jobs or in management and administration for pharmaceutical or other companies using chemical and biological techniques. Biology is often the major of choice for students planning to progress to professional schools in human or veterinary medicine.



BIOLOGY MAJOR/GENERAL BIOLOGY OPTION, CONSERVATION MINOR

Department of Biology
414 Agriculture Science Hall
(715) 425-3591



Bachelor of Science Degree. Academic Advising Plan.

Semester 1 (Fall)

BIOL 110 Freshman Colloquium	1
BIOL 150 General Biology	3
General Education CW (ENGL 100)	3
MATH 147 College Algebra & Trigonometry ¹	3
CHEM 121 General Chemistry I	5
Total semester credits	15

Semester 2 (Spring)

CHEM 122 General Chemistry II	5
ESM 105 Introduction to Environmental Studies ²	3
MATH 216 Elementary Statistical Concepts ³	3
General Education SB ⁴	3
General Education HW (P ED 108)	1
Total semester credits	15

Semester 3 (Fall)

BIOL 230 Zoology	3
BIOL 296 Field Research Experience	2
ESM 109 Introduction to Forestry	2
PHYS 151 and 156 General Physics and Lab	5
General Education CW (ENGL 200)	3
Physical Education Activity HW	0.5
Total semester credits	15.5

Semester 4 (Spring)

BIOL 210 General Botony	3
ESM 151, Intro to Land Use Theory & Practice	3
General Education HF	3
Biology elective	3
General Education SB	3
Total semester credits	15

Semester 5 (Fall)

BIOL 360 Ecology	3
SOIL 210 Introduction to Soil Science	3
General Education HF	3
General Education CS	3
American Cultural Diversity	3
Total semester credits	15

Semester 6 (Spring)

ESM 360 Applied Hydrology and Water Quality	4
Biology Elective	4
Biology Elective	3
Liberal Arts ⁵	3
Physical Education Activity HW	0.5
Total semester credits	14.5

Semester 7 (Fall)

ESM 343 Woodlot Management	3
Biology elective	4
Biology elective	3
General Education MD	3
General Elective	3
Total semester credits	16

Semester 8 (Spring)

BIOL 410 Senior Colloquium	1
BIOL 481 Seminar	1
SOIL 440 Soil and Water Conservation	4
Liberal Arts Course	3
Global Perspective Course	3
General Elective	3
Total semester credits	15

Summary of Degree Requirements

General Education	39-51 cr.
Core	21 cr.
Required Supporting Courses	21-22 cr.
Directed Electives	13 cr.
Credits to Degree.....	120 cr.

¹Your math placement score will determine which math course you start with. MATH 147 is the minimum requirement for the biology major, but some graduate or professional programs may require at least one semester of calculus. If you are planning to take calculus (MATH 166), then MATH 149 (Pre-calculus) should be taken instead of MATH 147.

²Also counts as an EC General Education course

³Other courses that satisfy the statistics requirement for the biology major include MATH 226, MATH 326, and ANSC 314. MATH 216 double-counts as a Liberal Arts course.

⁴ Visit the Web for the most recent list of General Education courses.

⁵Three Liberal Arts courses are required. Other requirements, such as MATH 216, and some Global Perspectives and American Cultural Diversity courses, double count as Liberal Arts Courses.